

NASA Facts

National Aeronautics and
Space Administration
Washington, DC 20546
(202) 358-1600



For Release

HOLD FOR RELEASE
UNTIL PRESENTED
BY WITNESS
May 14, 2003

Statement of
Sean O'Keefe
Administrator
National Aeronautics and Space Administration

before the

Committee on Commerce, Science and Transportation
United States Senate

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before the Committee with Admiral Gehman to discuss our ongoing efforts to honor the solemn pledge we have made to the families of the crew of *Columbia* and to the American people. That pledge is that we will find out what caused the loss of the Space Shuttle *Columbia* and its crew, correct what problems we find, and safely continue with the important work in space that motivated the *Columbia* astronauts and inspired millions throughout the world.

Much has happened since I appeared before this Committee and the House Committee on Science at a joint hearing on February 12, less than two weeks after the tragic accident.

Most importantly, a grateful Nation has laid to rest with full honors six American heroes: Rick Husband, William McCool, Mike Anderson, Dave Brown, Kalpana Chawla and Laurel Clark. The people of the state of Israel also paid their final respects to Israel's first astronaut, Ilan Ramon. We continue to be sensitive to, and supportive of, the needs of the astronauts' families and will be at their side as long as they desire our support.

We appreciate that the FY 2003 Omnibus Appropriations Act included \$50 million in funding to help pay for the costs of the recovery operation and accident investigation by

the Columbia Accident Investigation Board (CAIB). We have established new accounting codes in the NASA financial system, titled Columbia Recovery and Investigations, to capture these costs. We are monitoring very closely the costs associated with this effort and we will ensure that the Congress is kept apprised of our continued progress.

I would like to thank the Committee for their expeditious enactment of the Columbia Orbiter Memorial Act which authorizes construction of a Memorial at Arlington National Cemetery in recognition of the STS-107 Columbia astronauts. In addition, NASA has established the NASA Family Assistance Fund which enables NASA employees to help provide for the families of the STS-107 crew and families of other NASA employees who have lost their lives while serving the Agency.

NASA is deeply grateful for the support we have received during recovery operations from the men and women from the Department of Homeland Security, including the Federal Emergency Management Agency, National Transportation Safety Board, Environmental Protection Agency, Federal Bureau of Investigation, Department of Defense, Department of Transportation, U.S. Forest Service, U.S. Park Service, Texas and Louisiana National Guard, state and local authorities, and private citizen volunteers who have helped us locate, document, and collect debris. In visiting with these folks, I can report to the Committee that the morale and commitment of the recovery team was an inspiration to me and to the entire NASA family. The outpouring of support from the local businesses, community leaders and the citizens of East Texas have especially humbled us. During the past three months there were approximately 5,700 personnel in Texas at any one time involved in the Shuttle material recovery. More than 20,000 people in all helped with this effort.

The recovery operations, which stretched from San Francisco, California to Lafayette, Louisiana, are essentially complete. Nearly 85,000 pounds of debris have been recovered, representing approximately 38 percent of Columbia's dry weight. Of the nearly 83,000 specific items recovered from the accident, more than 79,000 have been identified, with 762 of these coming from the left wing of the Orbiter. We are continuing to search some remote areas in western Texas, Utah and New Mexico.

As of May 5, the Lufkin Operations Center had completed searches in all 169 Texas counties that reported Shuttle material sightings. The Lufkin Center closed on May 10 and we have transitioned to a smaller scale Recovery Operations Center located at the Johnson Space Center in Houston. We are hoping that in the fall, when vegetation dies back, hunters and campers may find additional debris. In fact, directions for reporting any debris will be given to each hunter as he or she applies for licenses.

I am saddened to note that one of the helicopters searching for debris from the Space Shuttle Columbia crashed in the Angelina National Forest in east Texas on March 27. Buzz Mier, the pilot and Charles Krennek, a Texas Forest Service Ranger were killed in the crash, and three other crewmembers were injured. Our thoughts and prayers go out to the families of the helicopter crew members killed in the accident.

Using video of Columbia's reentry provided by research institutions and helpful citizens, along with radar and telemetry data, we have identified several additional search areas in West Texas, Utah and New Mexico. To date, no material in these areas has been positively identified as coming from Columbia.

NASA Cooperation With Columbia Accident Investigation Board

The investigation of the CAIB is progressing. NASA recognizes the need for a credible and thoroughly independent inquiry and is fully cooperating with the Board.

The Contingency Action Plan and standing investigation board were activated within an hour after the *Columbia* accident. This standing board was the result of the lessons learned from the Challenger accident in 1986, which indicated the importance of having a panel of qualified investigators ready to initiate work immediately following an accident. Subsequent to the Board's formation, we received advice and counsel from Members of this Committee, as well as your colleagues in the House of Representatives and others, that the Board's charter should include revisions to guarantee its complete independence in the investigation and to ensure that the investigation be as thorough as possible. NASA has been responsive to these suggestions and has moved expeditiously to make appropriate changes to the charter and to add members to the Board to expand its composition.

More broadly, across our entire organization, NASA personnel are cooperating with the work of the CAIB. We continue to coordinate and categorize the collection of debris along the path of *Columbia's* reentry and reconstruct the orbiter at the Kennedy Space Center. We are collecting and providing the Board with integrated image analysis and data. We are conducting fault tree analyses to look at all possible causes of the accident that the Board will independently validate.

In summary, the men and women of NASA fully understand and support the important work of the CAIB. We look forward to learning from and acting on the Board's recommendations.

Status of International Space Station and Hubble Space Telescope

While waiting for plans to be made for their return to Earth, the ISS Expedition 6 crew-- Commander Ken Bowersox, Science Officer Donald Pettit, and Cosmonaut Flight Engineer Nikolai Budarin--continued to perform science and routine ISS maintenance on orbit. The Expedition 7 crew -- Edward Lu and Yuri Malenchenko -- arrived at the ISS aboard the Soyuz early Monday, April 29. The Expedition 6 crew returned to Earth on May 3.

In the absence of Shuttle support, NASA and the International Partners are addressing contingency requirements for the ISS for the near- and long-term. In order to keep the Expedition 7 and future crews safe, we must ensure that they have sufficient

consumables, that the ISS can support the crew, and that the crew is able to return safely to Earth.

Working closely with our International Partners, we have confirmed that the ISS has sufficient propellant to maintain nominal operations through at least the end of this calendar year. With the docking of the Progress re-supply spacecraft on February 4 (ISS Flight 10P), the crew has sufficient supplies to remain on the ISS through August without additional re-supply. The next Progress flight is scheduled for June. As we move beyond June, however, potable water becomes the constraining commodity. We are currently working closely with our Russian partner, Rosaviakosmos, to explore how best to address this issue on future ISS re-supply missions.

All remaining U.S. manufactured International Space Station hardware for the Core Configuration has been delivered to the Kennedy Space Center and element ground processing is on schedule. The Node 2 module for the Space Station, built for NASA by the European Space Agency, will be delivered to the Kennedy Space Center by early this summer. Only one Space Shuttle mission to the Space Station in the critical path to U.S. Core Complete, STS-118, was scheduled to use *Columbia*. A revised U.S. Core Complete assembly schedule and subsequent deployment of international partner modules after installation of Node 2 will be confirmed when the Shuttle is ready to return to flight status.

With respect to the Hubble Space Telescope, all of our remaining Shuttle Orbiters are capable of supporting any necessary servicing missions. Currently, the Hubble Space Telescope is performing well, and this robust observatory is in no immediate need of servicing. Should a delay in the planned November 2004 servicing mission occur that impacts the Telescope's ability to perform its science mission, the Hubble can be placed in safe mode until a servicing mission can be arranged.

Anticipating a Return to Flight

We have begun prudent, initial planning efforts to prepare for "Return to Flight" in order to be ready to implement the findings of the CAIB. NASA's Return to Flight analysis will look across the entire Space Shuttle Program to evaluate possible improvements in safety and flight operations in addition to implementing all of the recommendations of the Board.

I have selected Dr. Michael A. Greenfield, the Associate Deputy Administrator for Technical Programs, to lead our Return to Flight activity along with William Readdy, our Associate Administrator for Space Flight. They will co-chair the newly formed Space Flight Leadership Council. The Council is composed of the Associate Administrator for Safety and Mission Assurance, the Deputy Associate Administrator for International Space Station and Space Shuttle, and the four Space Flight Center Directors. The Council will review and assess each course of action recommended by the Return to Flight Planning Team and provide direction to the Space Shuttle program for implementation.

The Return to Flight Planning Team is already working to incorporate the CAIB's first two preliminary recommendations into the Return to Flight strategy.

In the interest of assuring that NASA fully addresses each of the CAIB's recommendations, I have asked Tom Stafford to lead a team that will provide an independent assessment of NASA's strategy for implementing the CAIB's recommendations. We are working to define the full membership of the team.

I would also like to thank Admiral Gehman and the rest of the Board members for the thorough and diligent manner in which they are conducting their investigation. We are grateful for their efforts. We will make our human space flight program better and safer because of their work.

As I stated earlier in my testimony, we still have a long road to travel until we can return the Shuttle to flight. The lessons of past accident investigations tell us that we have reached a critical juncture in the process of evidence gathering and analysis at which patience is absolutely required. I commend the members of this Committee for their support of this vital investigation. We at NASA look forward to continuing to work with the Committee to ensure that we learn from this accident, move forward to develop and utilize the capabilities that can best and safely help us achieve our national objectives in aeronautics and space research and exploration.

Mr. Chairman, thank you for calling this important hearing. I look forward to responding to your questions.